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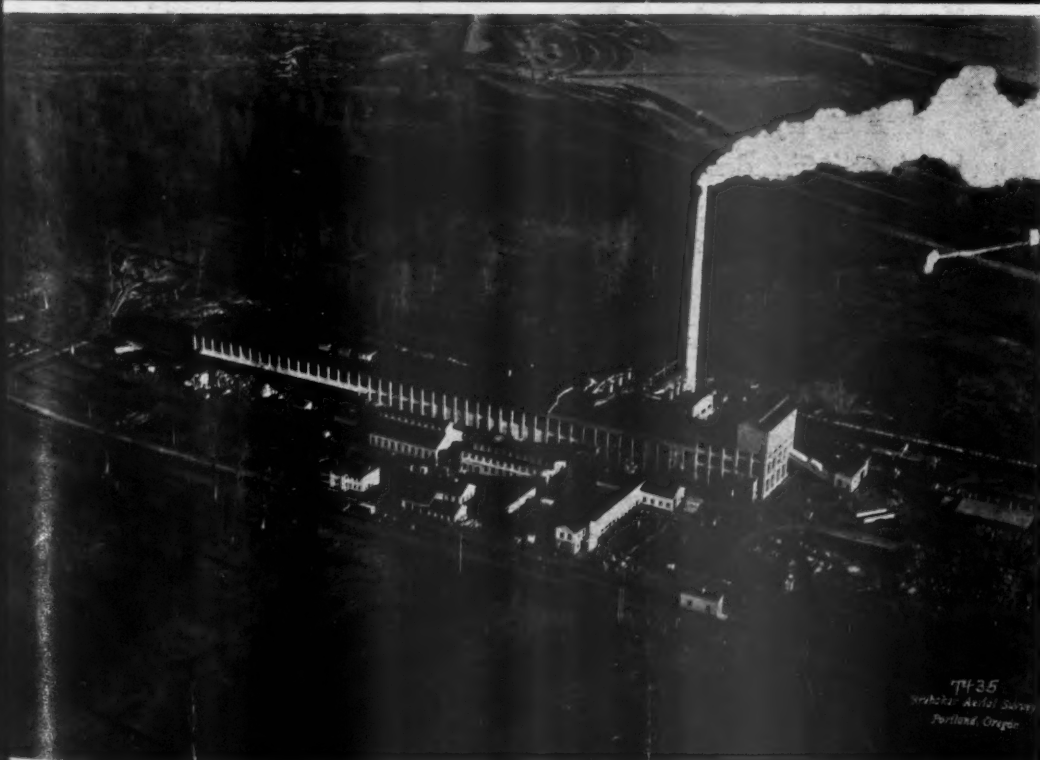
— 1935 —

The
Longview Fibre Company
Longview, Washington
as it is today

Aerial view by Photo-Art
Commercial Studios, Portland



PACIFIC PULP & PAPER INDUSTRY



— 1928 —

The
Longview Fibre Company
as it appeared when
the first unit was
completed in 1928

Aerial view by Brubaker
Aerial Surveys, Portland

SEPTEMBER

Volume 9

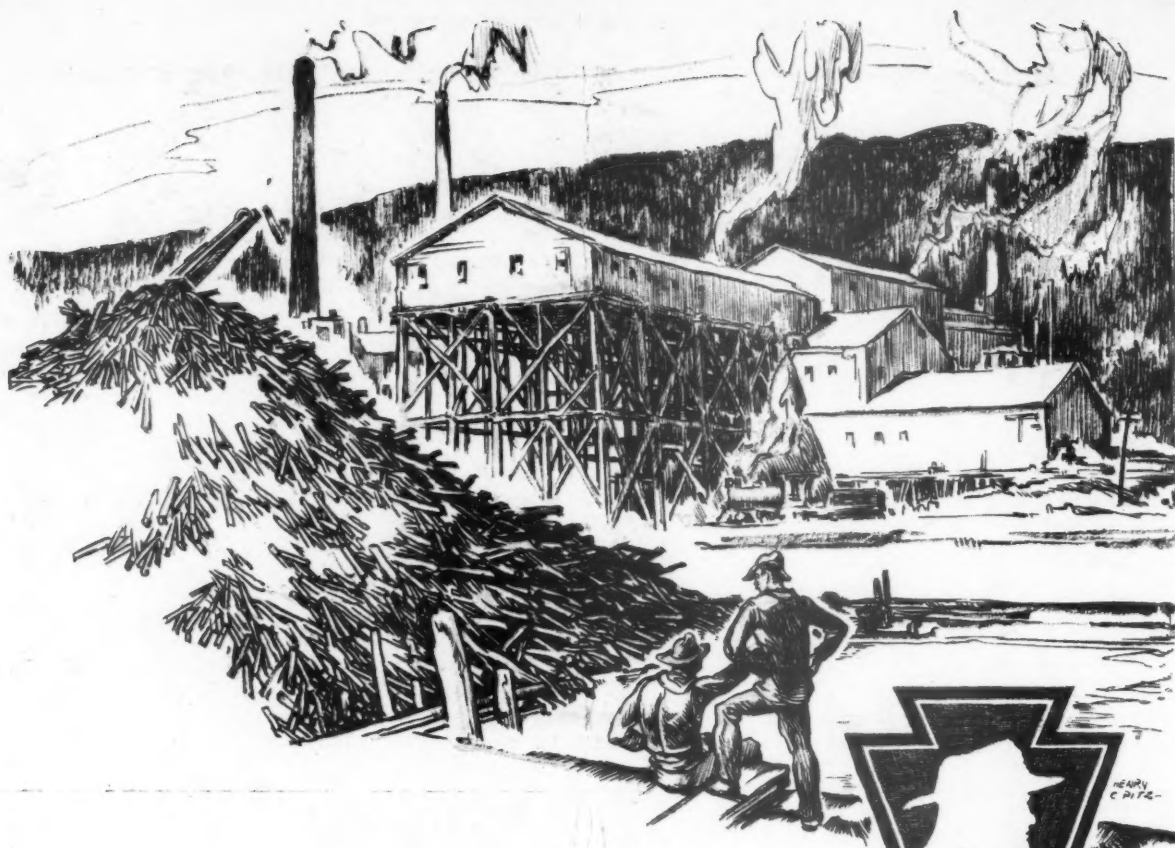
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HOW MUCH IS A CORD OF PULPWOOD?

A Study of Pulpwood Conversion Factors in the Pacific Northwest

By J. ELTON LODEWICK

Pacific Northwest Forest Experiment Station,
Portland, Oregon

The pulp industry of the Pacific Northwest has always obtained the major portion of its wood supply in log form, a practice linked to original dependence upon the open log market. A portion of the supply is still obtained from the same source, pulp mills buying an appreciable part of their requirements from established loggers. After some of the companies purchased timber lands and conducted their own woods operations they continued to bring in wood in log form. The pulp species grow in mixture with lumber species, and logging methods in vogue have presupposed clear cutting of tracts, because only under such a system can an output sufficient to justify heavy equipment and expensive railroad installations be obtained. Thus pulp operators use the pulpwood species and sell the high grade and lumber logs on the market. Another part of the pulp mills' wood supply originates in sawmills which utilize portions of the logs for lumber and reduce the remainder to sizes that can be handled by the chippers.

When logs are purchased for pulp mills they are usually bought by log scale. This method is crude because the amount of wood per thousand feet log scale varies with both log diameter and log length. The pulp mill is concerned primarily with the weight of wood purchased, since within a given species pulp yield is directly proportional to weight. But weight is affected by moisture contained in the wood, and purchase upon a weight basis is so complicated by the moisture content that this method has not proved feasible. At a given moisture content the weight of a unit volume of wood varies as the specific gravity or density, and ranges between somewhat restricted limits in each species.

Each mill has developed its own factors for converting log scale into cords and cords into cubic feet of solid wood. The variation in those now in use indicate the desirability of establishing factors based upon adequate measurements and capable of general application.

"Each pulp mill has developed its own factors for converting log scale into cords and cords into cubic feet of solid wood. The variation in those now in use indicate the desirability of establishing factors based upon adequate measurements and capable of general application."

"The data presented in this report were collected primarily to provide adequate factors for converting tree volumes and log scale into cords and cords into cubic feet. This necessitated measurements of the degree of utilization in trees of different diameters and paves the way for more intensive analysis of the effect of present practices in utilization and on forest management."

During the past decade many pulp mills have operated wholly or in part on sawmill waste, odd-shaped pieces usually four feet in length and resembling cordwood in both size and shape. The use of such wood increased rapidly until in 1929 approximately one-third was reported to be sawmill waste. The reports are undoubtedly in error since at least a small part of such material originated in sawmills which made a practice of converting the whole log into pulpwood with no pretense of recovering lumber. Even so, sawmill waste contributed heavily to the supply.

With the advent of marked curtailment in lumber production, the available sawmill waste was sharply reduced, as was the supply of pulpwood logs on the open market. Pulp mills owning and operating timber tracts were confronted with the problem of increasing production of pulpwood species and at the same time curtailing the production of the associated lumber species. In some cases they turned to lighter and more mobile logging equipment which permits selective

harvesting of desirable trees; in others they reduced or eliminated the production of lumber and converted the entire log into pulpwood in the breakdown mill; and in still others they purchased a larger proportion of their supply in the form of cordwood. Mills without timberlands began purchasing their supply from contractors or small operators who usually produced it in cordwood form, from independent loggers operating in small isolated tracts of timber, and from sawmills which turned from lumber production to pulpwood production by operating as breakdown mills.

The shift from logs to cordwood is impossible to follow statistically. Annual consumption is always reported in cords, regardless of the form in which the wood was received. But the increased number of cordwood operators and the enlarged contracts for cordwood indicate that the trend has been conspicuous. It has undoubtedly been accentuated by lack of employment which has led many to cut wood at a very low wage. Whether the trend will be maintained is problematical. Operating against its continuance are the large holdings of pulp timber which are so remote that logging appears to be the only feasible method of getting them on the market, the large investments in break-down machinery, the fact that under normal conditions wood can be obtained more cheaply in log form, and the inability to obtain a year's supply in the short period during which peeling and hauling can be done. On the other hand certain factors may operate to maintain or increase the proportion purchased in cordwood form. Principal among these is the increasing amount of second-growth timber which, because of its size and its occurrence in small tracts can be harvested comparatively cheaply in cordwood form. The prospects of future shortages of employment may tend to keep wages for labor at such a point that cordwood can be produced in competition with logs. Again, the trend towards stabilization of populations



Figure 1. An exceptionally well-piled rick of lowland white fir pulpwood from near the base of a medium-sized tree. Note the preponderance of sticks approaching a sector in cross-section.

through subsistence homesteads and the development of local industries may make the production of pulpwood an important outlet for off-season labor, in which event the social aspects may tend to counterbalance existent differences in production costs. If the pulp and paper industry is to continue the purchase of an appreciable portion of its wood supply in the form of wood cut and split in the woods by manual labor, the effect of this practice on forest management and utilization should be determined.

The data presented in this report were collected primarily to provide adequate factors for converting tree volumes and log scale into cords and cords into cubic feet. This necessitated measurements of the degree of utilization in trees of different diameters and paves the way for more intensive analysis of the effect of present practices in utilization and on forest management.

Source of Data

Pulpwood operations on three tracts in the Cascade Mountains a few miles east of Scio, Oregon, were used in the study of old-growth western hemlock and lowland white fir. The stand on all of these tracts was made up of Douglas fir, western hemlock, and lowland white fir in various proportions. On two of the tracts, the trees ranged from 100 to 210 years in age, with the majority falling between 145 and 155 years. On the third the trees averaged 20 years younger. The pulpwood species were being removed prior to logging the fir.

Data on second-growth western hemlock and Sitka spruce in the coastal belt were obtained near Aberdeen, Washington. The stand was composed principally of western hemlock and Sitka spruce ranging from 60 to 100 years of age.

Solid Wood Contents of Stacked Cords

There is a dearth of information on the solid wood contents of cords of stacked wood in the Pacific Northwest. Because of the large timber in this region and the practice of splitting practically every bolt, measurements made on other species in other parts of the country might be expected to be inapplicable.

During the course of the present investigation opportunity was afforded for measuring the solid contents of 137

cords of peeled old-growth western hemlock and lowland white fir near Scio, Oregon, and 20 cords of peeled second-growth western hemlock and Sitka spruce near Aberdeen, Washington.

Method of Measurement

The solid contents were measured according to the scheme used in earlier studies of Douglas fir cordwood.¹ Each stick was classified as to shape in cross section, and the dimensions necessary to determine its area measured to the nearest one-quarter inch. The cross-sectional shapes recognized were rectangles, trapezoids, triangles, sectors, semicircles and circles. Odd shapes were arbitrarily divided into and measured as two or more of the above shapes. When this was necessary, a record was kept of the number of extra pieces so made, in order that the original number of pieces in the rick² could be ascertained. The general appearance of the material measured may be seen in Figure 1 to 4. To facilitate computations a table was made for each shape containing areas for the range of sizes encountered. The end areas of the sticks in each rick were read from the tables and totaled.

The cubic feet of solid wood in the rick then equaled.

$$\text{End area of all sticks (in sq. in.)} \times \text{length of stick (in inches)} =$$

1728



Figure 2. Lowland white fir pulpwood from near the top of a medium-sized tree. Note the proportion of circular and semi-circular sticks.

Measurements were made on only one side of each rick under the assumption that taper, if present, would be taken care of by so piling that the top of the rick was level. In order to test the accuracy of this assumption, 16 cords were measured on both sides. The area of the larger side exceeded that of the smaller side by from 0.7 to 5.1 per cent, average 2.1 per cent. The agreement is sufficient to justify measurement of only one side of each rick.

The "cords" as piled in the woods were different on the two areas studied, and in both cases exceeded a standard cord. At Scio the cutters were paid on the basis of a "cord" of four-foot sticks piled 8 feet long and 52 inches high, and which is hereafter referred to as a commercial cord. At Aberdeen, cutters were paid on the basis of a "cord" of 52-inches high. Since this was known locally as a unit it will be so referred to throughout this report.

Reduction of Commercial Cords and Units to Standard Cords

Commercial cords and units were converted to standard cords by means of the following relation.

$$\frac{\text{Solid Wood in Standard Cord} = \text{Solid Wood in Commercial cord (or unit)}}{128}$$

$$\frac{X}{\text{Gross Volume of commercial cord (or unit)}}$$

This method assumes that the ricks as measured are as closely stacked as they will be when laid down at the pulp mill for measurement. Since the cutters are paid on the basis of cords or units 52 inches in height, and the mills buy on the basis of 48 inches the contractor obtains a theoretical overrun of 4 inches on each 52, or approximately 7.7 per cent. The contractors with whom this was discussed questioned the soundness of these assumptions, claiming that they obtained no such overrun, principally because the wood was piled more closely at the mill than in the woods.

To test the validity of the assumption, 28 cords have since been measured in the yard of a mill. These contained, on the average, 86.10 (S.D. plus-minus 4.25) cubic feet of solid wood. The close agreement between this average and that previously computed for all the material measured (85.91 cu. ft.) served to sup-

port the procedure used for reducing commercial cords and units to standard cords.

The reasons for failure on the part of most contractors to obtain the theoretical overrun may be explained in one of two ways. A small "shrinkage," as the contractor designates it, may result from the failure of some cutters to stack as closely as they might (compare Figures 1 and 4). This source of shrinkage can be entirely eliminated through adequate supervision and adoption of a policy of pay reduction for ricks which are short. The second source of shrinkage, and undoubtedly the most important, is the sticks left in the woods when the ricks are loaded for transportation. In many cases sticks must be discarded because they are too small, because they contain rot, or because they show unusually large knots. In other cases portions of ricks, or even entire ricks, are missed. This source of shrinkage may also be reduced by adequate supervision.

Solid Wood Contents of Standard Cords

The commercial cords in the Scio sample averaged 93.67 cubic feet of solid wood per cord, while the average unit at Aberdeen contained 104.37 cubic feet. These are equivalent to 86.55 (S.D. plus-minus 8.57) and 85.37 (S.D. plus-minus 5.53) cubic feet per standard cord, respectively. The difference between the average is not significant.

¹Yield of Cordwood from Old-Growth Douglas Fir. J. E. Lodewick and H. M. Johnson, Pacific Northwest Forest Experiment Station, Office Report, December, 1933.

²The term "rick" is here used to designate a pile of 4-foot or 4.5-foot wood.

³Standard Deviation (S. D.) indicates that in another sample of equal size the average will not vary from the first average by more than the amount of the standard deviation. In this case the average of another sample of 28 cords would fall between 81.85 and 90.35 cubic feet.

⁴See Footnote 1.

⁵Cottonwood Pulpwood Conversion Factors. J. Elton Lodewick, Pacific Northwest Forest Experiment Station, Office Memorandum, November 29, 1933.

⁶Schnur, C. L. Converting Factors for Some Stacked Cords. *Journal of Forestry*, XXX:7, pp. 814-820. November, 1932.

⁷Chapman & Demeritt. *Elements of Forest Mensuration*. J. B. Lyon Co., 1932. Bruce & Schumacher. *Forest Mensuration*. McGraw Hill, 1934.



Figure 3. Western hemlock pulpwood from base of a large tree. Note the irregularity resulting from the gnarly butt section.

Previously reported measurements¹ of old-growth Douglas fir fuelwood showed a solid contents of 84.49 (S.D. plus-minus 5.17) cubic feet per standard cord, on 16 cords of cottonwood pulpwood an average of 85.85 (S.D. plus-minus 3.90) cubic feet, and on 6 cords of second-growth Douglas fir fuelwood an average of 88.10 cubic feet. Since the difference between these and the new pulpwood data is not significant it may be concluded that within the range studied, species exert no influence on the solid contents of stacked cords. Consequently the data from all sources have been grouped and indicate an average solid content for split wood in the Pacific Northwest of 85.91 (S.D. plus-minus 9.54) cubic feet per standard cord. For all practical purposes this may be considered as 86 cubic feet.

Relation Between Number of Sticks and Solid Contents

In general, it is believed that the solid wood contents per unit of stacked wood increases with an increase in the size of the average stick. In other words,

the fewer the sticks per cord the more closely do the solid contents approach the theoretical maximum of 128 cubic feet, a maximum which, of course, is never attained. Measurements made in Europe, in Canada, and in the eastern United States tend to confirm this relation between stick size and solid contents. In most of these cases, however, measurements were made on round sticks, and with bolts of practically identical size within a cord. Schnur's results⁶ indicate that in split wood there is no relation between stick size and solid contents. The more recent forest mensuration texts⁷ accept this view.

The relation between number of sticks and the solid wood contents of cords of split wood was determined. The solid contents of a standard cord were found to increase from 80 cubic feet in cords of 50 sticks to 88.5 cubic feet in cords of 105 sticks. Further increases in stick number, within the range studied, had no apparent effect on the volume of wood per cord. Since the data represent a good cross section of commercial piling practice it is suggested that the arithmetic average (86 cubic feet per cord) is sufficiently accurate for all practical purposes, and the effect of stick size can be disregarded.

The standard deviation about the mean is considerably higher than in most investigations of this nature, but can be explained upon the basis of the procedure followed. In many previous studies of the solid contents of stacked cords the material has been carefully piled in especially constructed racks so as to reduce variables to a minimum. In the present study, on the other hand, measurements were made on ricks of various sizes as piled in the woods by cutters. Such ricks are subject to all the possible factors affecting solid contents, prime among which are variations in the dimensions of the rick, irregularities in the sticks, care in piling (see Figures 1 to 4) and the range of stick size within individual ricks. Variations in rick dimensions would exert the greatest influence on solid contents, especially when ricks of various lengths were adjusted to a standard length of eight feet for comparison. That there are no consistent variations in solid contents can be attributed directly to rick size is shown by the data presented in Table 1.



Figure 4. Western hemlock pulpwood from central portion of a large tree. Note triangular and trapezoidal cross-sections. This rick has more voids than the average.

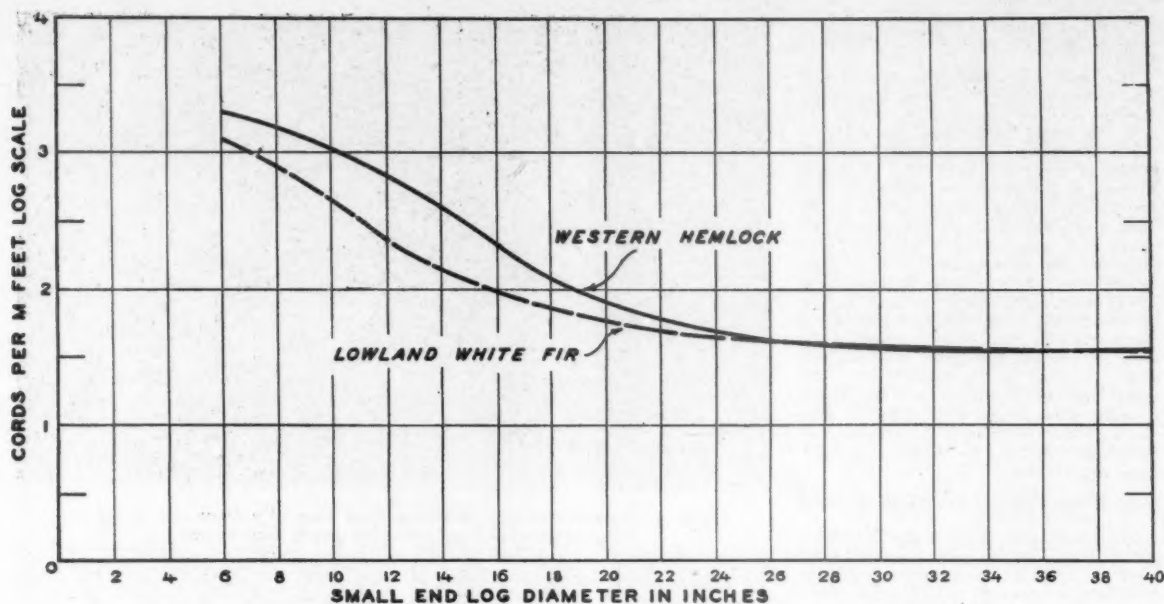


Figure 5. Number of cords of wood contained in 32-foot logs of different diameters.

Table 1. Comparison of Solid Content: per Cord in Ricks of Different Sizes

Size of rick Cords.	Number in sample	Volume per average cord Cubic feet
0.25	3	85.55
0.5	28	84.51
0.75	11	82.56
1.0	47	86.45
1.25	5	92.64
1.5	11	89.81
1.75	3	86.08
2.0	10	88.48
3.5	5	82.76

Conversion of Log Scale to Cords

Having determined the cubic feet of wood in an average cord it is simple matter to express this in terms of wood volume, either cubic feet or cords, per unit of log scale. From Figure 5 the number of cords of wood per thousand feet, log scale, Scribner Rule in 32-foot hemlock and white fir logs of different diameters can be determined. In deriving these data, actual log volumes for each diameter as measured in this and in previous studies were used. The difference between hemlock and white fir in the smaller diameters is attributable to differences in taper. The yield in cords was obtained by using the established factor of 86 cubic feet of wood per cord. From Figure 5 it is evident that there are more cords in a thousand feet of small logs than in the same quantity of large logs. For example, there are 3.3 cords per M feet in 6-inch logs as compared to 1.8 cords in 30-inch and larger logs.

The same data are presented somewhat differently in Figure 6 which shows the number of board feet, log scale, in a cord of wood from 32-foot logs of different diameters.

The Degree of Utilization

The proportion of the total tree was determined from measurements made in several different ways depending upon conditions at the time of measurement. The details of these will not be given here.

The degree of utilization in second-growth western hemlock and sitka spruce is shown in Figure 7. There is a rapid increase in the tree volume used from 45 per cent in 10-inch trees to 85 per cent in 21-inch trees. Utilization then gradually decreases until it is only 82 per cent in 30-inch trees, and becomes constant at that point in larger trees.

The curves also indicate that from 3 to 6 per cent of the tree was left in the woods because of breakage or as long butts which were difficult to split because of interlocked grain.

The percentage of total tree volume left in stumps increased steadily from about 5 per cent in 10-inch trees to 8 per cent in 47-inch trees, reflecting a tendency to cut high stumps because of interlocked grain in the butt swell.

The volume left in tops formed 55 per cent of the tree volume in 10-inch trees, decreased to 4.5 per cent in 21-inch trees and then increased to become constant at 5 per cent.

Similar utilization curves were prepared for the old-growth western hemlock and lowland white fir at Scio, Oregon. They had the same trends as did the Aberdeen sample, though utilization was decidedly better. The used portion in the larger trees was 88 per cent as compared to 82 per cent at Aberdeen. The stump formed slightly over 5 per cent of the total tree volume, the top 5.5 per cent in the large trees, and only one per cent was lost in breakage and in unsplit blocks.

The indicated differences in utilization between Scio and Aberdeen may or may not be significant. Measurements at Aberdeen were made late in the season after the wood had been removed, and it was impossible to obtain complete tree measurements. The used merchantable volume of each tree was obtained by subtracting the volumes of the stump, top, and unused merchantable volumes from the volume of an average tree of this height and diameter as given in a volume table. Consequently the degree of utilization might be somewhat higher or lower than indicated depending upon

whether the volume of the individual tree was less than or exceeded the volume given in the table. It is believed that the curves express the difference between the two operations, because of the practice of long-butting and of leaving large tops at Aberdeen.

The Yield Per Tree

The cords of wood obtained from trees of different sizes at Scio, Oregon, are shown in Figure 8. The lower curve is of interest to producers in that it indicates the yield in commercial cords. The upper curve is of interest to purchasers and foresters because it shows yield in standard cords.

Similar data for second-growth western hemlock and sitka spruce at Aberdeen are presented in Figure 9. The lower curve is the yield in units, the upper curve the yield in standard cords.

The effect of tree height on yield is shown by the increasingly greater yield in trees above 20 inches in diameter, a difference greater than that accounted for by differences in the degree of utilization.

A table expressing the expected yield in cords from western hemlock trees of different diameters and heights has been prepared and copies will be supplied upon request.

Discussion of Results

A study of pulpwood operations in western Oregon and western Washington has provided data useful to both industrialists and foresters, and has shown the need for further investigation of the problems encountered in providing raw materials for one of the growing industries in the Pacific Northwest.

An analysis of peeled split wood as stacked by cutters in the woods shows that the average standard cord contains

¹Meyer, Walter H. Volume Tables for Western Hemlock, Western Oregon and Western Washington, Pacific Northwest Forest Experiment Station, November 1, 1933. Mimeog.

²Sitka Spruce. Volume in Cubic Feet Inside Bark, W. H. Meyer, Pacific Northwest Forest Experiment Station. Mimeog. report not yet released.

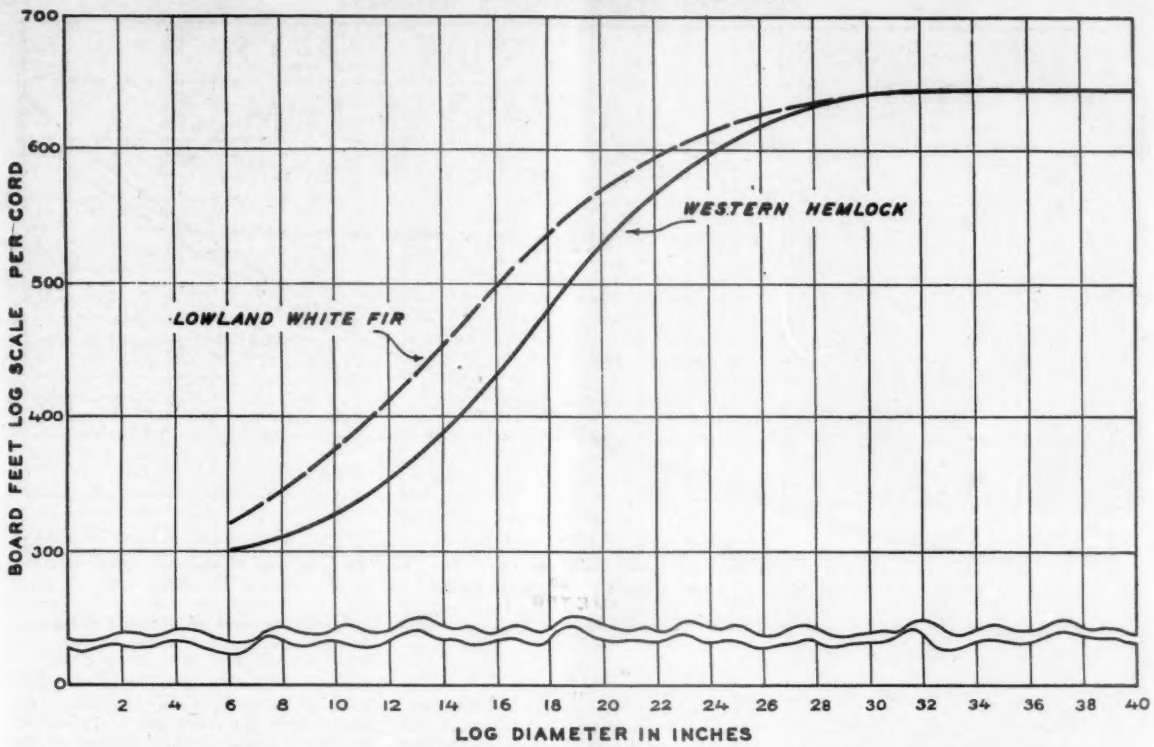


Figure 6. Number of board feet, log scale, contained in a cord of wood from 32-foot logs of different diameters.

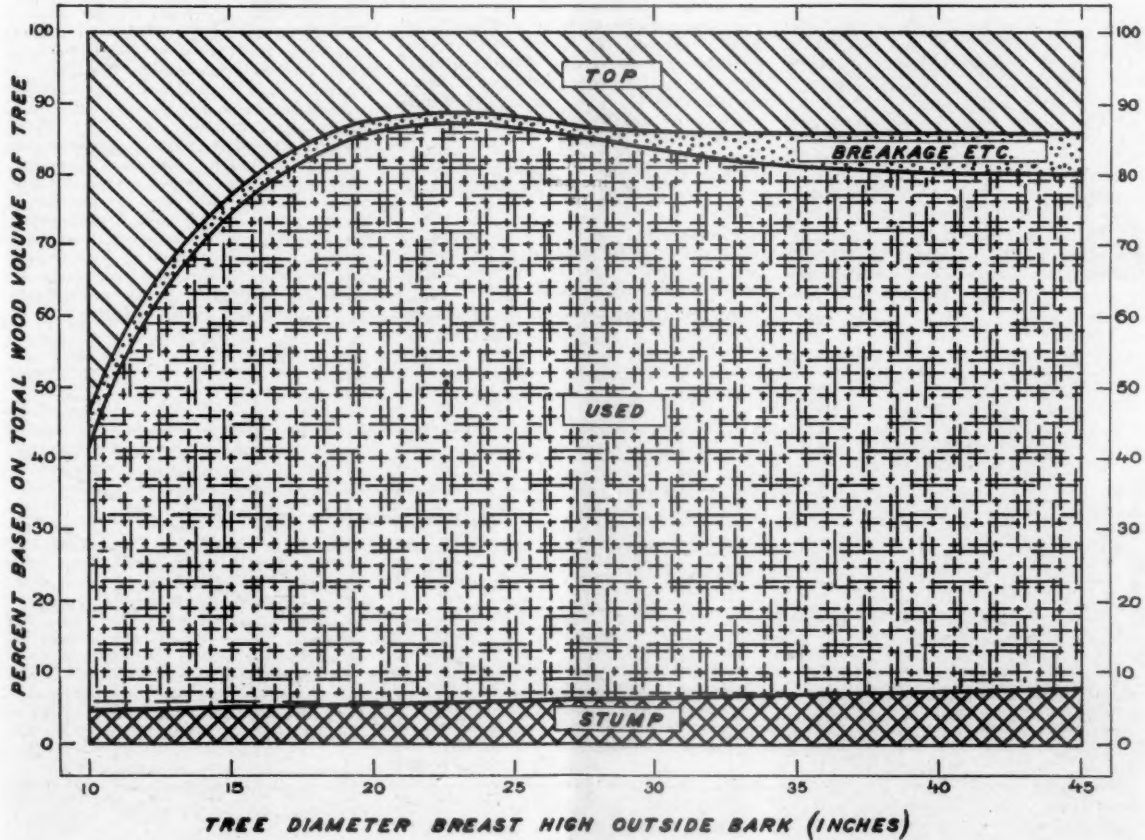


Figure 7. Disposition of the wood volume in trees of different diameters when converted into pulpwood bolts.

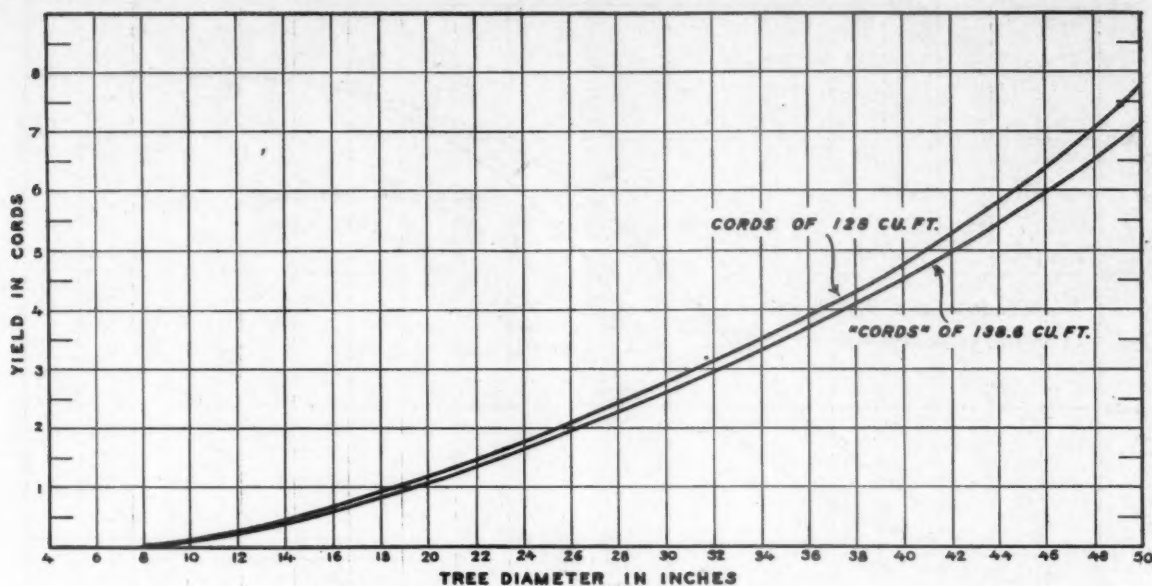


Figure 8. Average yields of peeled pulpwood from old-growth western hemlock and lowland white fir trees of different diameters.

86 cubic feet of solid wood, regardless of species or of age of timber.

The solid contents of cords is but slightly influenced by the number of show an increase from 80 cubic feet in cords of 50 sticks to 88.5 cubic feet in cords of 105 sticks, beyond which point number of sticks has no apparent influence. This relation is of academic interest, and for practical purposes may be disregarded.

Curves have been drawn to show the yield in cords and in cubic feet per thousand feet log scale in western hemlock and lowland white fir logs of different diameters. These indicate a variation from more than 3 cords per M feet in 6-inch logs to slightly less than 2 cords per M feet in 30-inch and larger logs. The converse of this relation, the number of board feet, log scale, per cord in logs of different diameters has also been presented in graphic form.

The degree of utilization in trees of different diameters appears to be dependent primarily upon the desire of the operator to obtain the maximum yield from his stumpage. It depends in lesser degree upon the splitting properties of the timber which may be either a species characteristic or may be influenced by rate of growth. In general the per cent of the total tree volume actually utilized (except in markedly defective timber) varied from 35 or 40 per cent in 8-inch trees to 83 or 91 per cent in trees between 20 and 25 inches in diameter. In larger trees the utilization decreased slightly to become constant at 76 or 88 per cent, depending upon the area studied.

Curves have also been prepared to show the yield in commercial and standard cords from trees of different diameters on the areas studied.

An interesting comparison of the de-

gree of utilization and output per man hour could undoubtedly be made between cordwood operations and those removing a similar type of timber in the form of logs. One may lend itself to closer utilization both so far as tree size and the proportion of individual trees removed; one may have definite advantages in so far as cost of the pulp mill is concerned; one may yield a higher return to or provide more outlets for labor at the same f. o. b. mill cost; one may be better adapted to the practice of economic selective logging and to the practice of sustained yield forest management. The foundations for answers to these and other questions of similar magnitude and public interest have been established in the present study. Future investigations should complete the superstructure and provide data upon which to base intelligent solutions to the many problems involved in meeting the wood requirements of the pulp and paper industry.

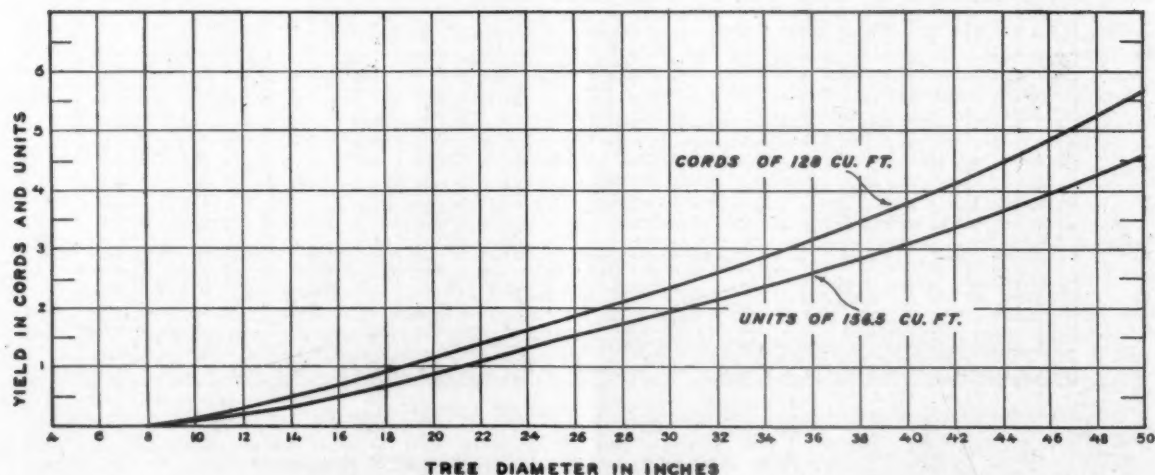


Figure 9. Average yields of peeled pulpwood from second-growth western hemlock and Sitka spruce trees of different diameters.

COAST TAPPI TO MEET IN SEATTLE

October 11th and 12th

The Pacific Section of TAPPI is planning a two-day meeting for October 11th and 12th, Friday and Saturday, at the New Washington Hotel in Seattle.

Earl G. Thompson, Northwest representative of the Great Western Electrochemical Company has been appointed general chairman of the meeting and W. R. Barber of the Crown-Willamette Paper Company at Camas, as first vice-chairman of the Pacific Coast Section is arranging the technical paper program. A number of interesting papers have already been obtained.

All day Friday and Saturday morning will be devoted to technical papers

and discussion. Friday evening a banquet will attract the TAPPI members and their ladies.

The Saturday morning session will include the annual business meeting of the Pacific Section.

Saturday afternoon will be given over to golf and to visiting the pulp and paper mills in Everett.

Members of the Superintendent's Association are extended a special invitation to attend the TAPPI meeting.

Mr. Thompson's committee will have an interesting program arranged for the ladies.

PACIFIC MILLS EARNINGS GAIN

Pacific Mills Limited, Canadian subsidiary of the Crown-Willamette Paper Company, reports a net profit for the fiscal year ending April 30th of \$210,454 after charges and taxes. This compares with a net profit of \$182,808 in the 1934 fiscal year, a gain of \$27,646.

This is equal after regular dividend requirements on preference stock outstanding to \$2.25 a share on 75,000 common shares, nearly all owned by Crown Willamette, and compares with \$1.88 a common share in the preceding year.

A. B. Martin, president, said the "slight increase in earnings this year is explained by an improvement in sales volume and prices of some of our products other than newsprint."

Prices Unsettled

Mr. Martin pointed out in his report to stockholders that efforts of the newsprint industry to stabilize prices at adequate levels have not yet met with any degree of success.

The company's April 30 financial statement reveals a strong position and working capital substantially in excess of normal requirements.

As a result of progress made last year in accumulating funds, a decision was made to retire approximately one-half of the funded debt on Aug. 1. The entire issue of first mortgage 6 per cent bonds is being redeemed on that date at 102 and accrued interest, leaving \$1,434,700 of par value of guaranteed subordinated mortgage 6 per cent bonds outstanding.

The issue called aggregates \$1,124,550. Cash and United States and Canadian government bonds as of April 30 totaled \$1,786,524 and by Aug. 1, the date of the call, it is expected the company will have accumulated sufficient funds through normal operations and by the sale of securities to redeem the called bonds and still have an excess of working capital.

As of April 30, current assets totaled \$3,498,322, including \$1,786,524 cash and government securities, and current liabilities totaled \$398,968, excluding the first mortgage bonds called for redemption.

A year earlier, current assets totaled \$3,452,517, cash and government securities \$1,795,562, and current liabilities \$469,492.

Approximately \$350,000 was expended during the year on improvements and additions to plants.

CROWN MAKES EXECUTIVE CHANGES

Effective September 1st the Crown-Willamette Paper Company transferred three operating executives to new positions.

R. H. R. Young, assistant mill manager at the West Linn mill, was transferred to the Pacific Mills Limited plant at Ocean Falls, B. C., where he will be assistant mill manager.

Malcolm J. Otis, of the San Francisco office, will succeed R. H. R. Young as assistant mill manager at West Linn. Mr. Otis has been in Portland temporarily as an assistant to George Berkey while Frank F. Sullivan was in Camas, substituting for George Charters who has been on the sick list due to a broken leg.

Maurice W. Phelps, who has for the past year been at Ocean Falls as assistant to Frank A. Drumb, mill manager, will return to Camas as a member of the technical and development department.

Mr. Otis spent seven years at Camas and a year at Floriston before going to San Francisco, where he has been located for the past six and one-half years as executive assistant to Mr. A. Bankus.

Mr. Young left Vancouver September 9th for Ocean Falls to assume his new duties.

SOUNDVIEW ADDS SIXTH DIGESTER

The Soundview Pulp Company of Everett, Washington, has under construction an addition to its digester building which will house the sixth sulphite digester. The new digester will be the same size as the other five, 17x56 feet. The building addition is approximately 36x48 by 78 feet in height.

It is expected that the new digester, which is being added to stabilize production and to compensate for time lost in lining digesters, will go on the line in December.

The Stebbins Engineering & Manufacturing Company will line the new digester, and will reline the other five digesters during 1936.

PACIFIC MILLS BOARD REELECTED

All directors of Pacific Mills, Ltd., subsidiary of Crown Willamette Paper Co., were reelected at the annual meeting, and all officers were reappointed.



MALCOLM J. OTIS
From San Francisco to West Linn



R. H. R. YOUNG
From West Linn to Ocean Falls



MAURICE PHELPS
From Ocean Falls to Camas

CROSSETT LBR. CO. GIVEN RFC LOAN OVER ASSOCIATION PROTESTS

Over the aggressive opposition of the American Paper & Pulp Association the Reconstruction Finance Corporation has granted a loan of \$3,850,000 to the Crossett Lumber Company of Crossett, Arkansas, to be used in constructing a kraft pulp and paper mill.

On August 29th Jesse Jones, chairman of the RFC stated that since the loan had been authorized no purpose would be served by granting a hearing or accepting a brief in opposition to the loan.

Mr. Jones in his prepared statement contradicted the assertions of the American Paper & Pulp Association which claimed it did not know the loan was under consideration and no opportunity had been afforded for the filing of a brief in opposition, by saying:

"A brief filed by the American Paper & Pulp Association, opposing the loan, was given full consideration before the loan was granted."

Mr. Jones' statement was issued while Mr. John Miller and Mr. Thomas Luke of the West Virginia Pulp & Paper Company were in Washington with Mr. Charles W. Boyce, secretary of the Association and Mr. Carl Whitney, association attorney, for the purpose of obtaining a hearing to block the loan.

The association opposes the loan on the ground that the government ought not make loans in competition with private capital and that there is more than enough kraft paper production in the country at the present time to take care of requirements. The point that the new mill may be able to produce more economically than some existing plants was not touched either in the association's protest or in the RFC announcement.

Other Governments Subsidize Pulp and Paper Industry

Nor has the point been brought out that the manufacturers of pulp and paper in this country, wholly privately financed, are competing in their own domestic market with pulp and paper products produced in foreign lands under heavy government subsidy, which is partly responsible for the present low prices on such products as unbleached sulphite pulp and newsprint.

Canada, Sweden, Finland and Norway all subsidize their pulp and paper industry through one means or another. The subsidy may be by means of low stumpage charges, grants of timberlands, tax exemptions, loans at low interest rates or special shipping rates. No matter what form the subsidy takes it hits directly at the privately financed American industry.

Private capital in America is in direct competition with government financing and has been for many years, but it has been foreign government financing of the foreign pulp and paper industry.

In answer to the assertion that the loan is in competition with private capital Mr. Jones said that, "Every government loan to industry competes with private capital, and it is for Congress to determine how long it wishes such loans made."

Mr. Jones' announcement read in part:

"Loans for the construction of pulp and paper mills were advocated and discussed before the House Banking and Currency Committee in January of this year when the extension of the RFC Act was under consideration, and debated on the floor of the House, January 29, 1935,

when the amendments to the RFC Act were adopted. Reference is made to pp. 77-78-79-80 of the Hearings of the House Committee on Banking and Currency 'to extend the functions of the RFC,' January 21-22-23-24 and 25, 1935; also the Congressional Record of January 29, 1935, pp. 1144-1165.

"We have only had on formal application for the construction of a pulp and paper mill—that of the Crossett Lumber Company, at Crossett, Arkansas.

"The security for this loan is conservatively estimated at \$12,000,000, or more than three times the amount of the loan. It includes, in addition to the new mill, a first mortgage on 333,803 acres of timber and pulp wood land; 970,000,000 feet of pine saw timber; 198,000,000 feet of hardwood saw timber; 1,054,000 cords of pine pulp wood; 716,000 cords hardwood chemical; three large saw mill plants; and the town of Crossett, Arkansas, with a population of 3,500 people who are dependent upon the operations of the Crossett Company. The town of Crossett, Arkansas, comprises about 3,000 acres of land on which there is located 685 modern homes, store buildings, office buildings, hotel, boarding houses, hospital, theater, ice plant and such other buildings as are needed to make a complete town, served by electricity, water and sewerage, all belonging to the borrower, and included in the mortgage.

"The loan is for \$3,850,000—estimated cost of the new mill—and matures in installments ending January 31, 1945. The company's previous earning record, including the last few years, assures payment of the loan.

"The annual capacity of the new pulp and paper mill will be approximately 31,000 tons of kraft paper, and 15,500 tons of dried sulphate pulp, and we have been importing approximately 500,000 tons of kraft pulp annually.

"Construction of the Crossett mill will furnish a great deal of employment immediately, and continually thereafter in its operation."

OREGON INDUSTRIAL RELATIONS ASSOCIATION FORMED

The Industrial Relations Association of Oregon, Portland, has been formed by a group of manufacturers, engaged in various lines of industry and trade, for the purpose of promoting industrial peace and a wider and clearer understanding of labor problems and objectives. John H. Smith, manager, Hawley Pulp & Paper Co., Oregon City, is one of the incorporators and is vice president of the new association.



CHARLES H. BELVIN
REPRESENTING CHROMIUM
CORPORATION OF AMERICA

Mr. Charles H. Belvin, who arrived on the Pacific Coast early in July to represent the Chromium Corporation of America, producers of Crodon industrial chromium plating, has had much experience in the employment of chromium plating in the pulp and paper industry.

For the past four years Mr. Belvin has been with the Chromium Corporation. The first year and a half of that time he spent in the various plants of the corporation and the balance in sales and service work contacting the pulp and paper mills in Michigan, Ohio and Wisconsin. He is a graduate electrical engineer from North Carolina State College.

Mr. Belvin is living at the Chasselon Apartments, 701 N. E. 28th Street, Portland, Oregon, but most of his time will be spent in calling upon the pulp and paper mills from Los Angeles north into British Columbia.

RICH COMES TO COAST

J. P. Rich, Jr., chief engineer of the Improved Paper Machinery Corporation of Nashua, New Hampshire, spent three weeks on the Pacific Coast in August, calling on a number of the mills with Kenneth B. Hall of Portland, Improved's Pacific Coast representative.

Mr. Rich came to the Coast by plane and returned the same way.

TARIFF COMMISSION TO INVESTIGATE PULP SITUATION

The Tariff Commission announces that in accordance with Senate Resolution 200, adopted August 24, 1935, an investigation, under Section 332 of the Tariff Act of 1930, will be held with respect to pulp wood and wood pulp. The resolution reads as follows:

RESOLVED, That the United States Tariff Commission, under authority conferred by Section 332 of the Tariff Act of 1930, is directed to investigate and report to the Senate, all facts relating to wood pulp, or

pulp wood, showing the volume of importations compared with domestic production, and the conditions, causes and effects relating to foreign competition, and all other facts showing the differences in, or which affect competition between, the production of wood pulp, or pulp wood, in the United States or that imported in the principal markets of the United States.

Senate Resolution 200 was introduced by Senator Borah of Idaho.

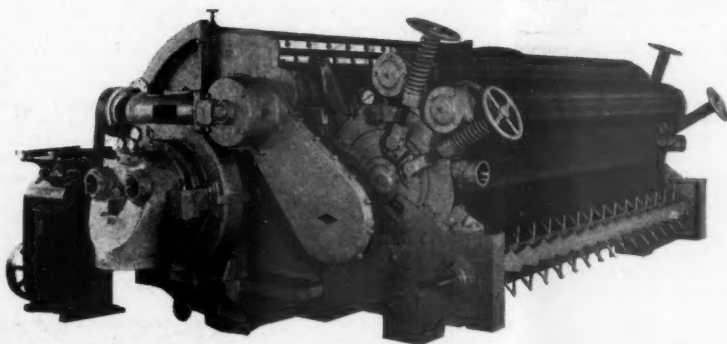
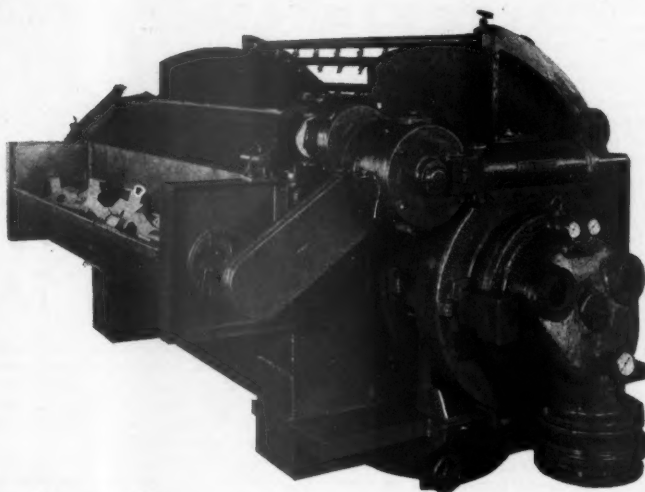


..NOW—2 NEW



MACHINES

"IMPCO" Rubber-Covered Acid Washer — with vacuum mould five-foot diameter by seven-foot length of face, washing showers, double-roll pulp removal device, micarta doctor, repulping chamber, repulper. All parts of mould and vat coming in contact with stock or water are rubber-covered. Capacity 130 tons sulphate pulp.



New Type "Impco" Rubber-Covered Acid Washer — with Auxiliary Vacuum Thickening Cylinder and Press Rolls. Machine handles capacity of over 200 tons sulphite per 24 hours. The sheet being removed from cylinder mould by double-roll pulp removal device, delivered on to secondary "Impco" cylinder and press rolls for purpose of increasing density. Note shredder.

Write for Detailed Description, Construction Features and Operating Data

IMPROVED PAPER MACHINERY CORPORATION

Upon request our representatives are available to make tests and assist mills in planning installations.

Nashua, New Hampshire

Pacific Coast Representative—KENNETH B. HALL, 219 Pittock Block, Portland, Ore.

EXPECT NEWSPRINT PRICE INCREASE

British Columbia newsprint manufacturers expect that when new contracts for paper are closed this fall they will stipulate a higher price. The newsprint industry is more or less agreed that a change in the price schedule should be nominal—possibly \$2 or \$3 a ton. This would just about compensate the producers for the higher costs of the past eighteen months and, at the same time, would be of such proportions as to permit publishers to adjust themselves to the higher rate with a minimum of disturbance.

Evidence of increased co-operation among the newsprint operators was seen in the frustration of recent efforts on the part of a large consuming group in the United States to tie up next year's contracts at the same price as this year.

For the first time in several years Canadian newsprint mills are adhering to a common price policy, which in itself is the best possible sign that a higher price is in prospect.

Excessive expansion of the industry, coupled with reduced consumption of paper and a general lowering in the price level, made the Canadian newsprint industry particularly vulnerable to price raiders during the last few years. Price decline began in 1928 and was not arrested, despite several abortive efforts to stabilize conditions.

Last fall the producers considered the time opportune for another attempt to establish a price that would permit profitable operation. Whether or not this move would have been successful is problematic, as Scripps-Howard and Hearst joined forces to block the effort by inducing St. Lawrence paper mills to contract for the supply of about 30,000 tons of paper this year at the then existing price level.

Since the beginning of the current year rising costs have made it imperative that the manufacturers secure a better price for their product. Nothing could be done, of course, until the renewal of contracts came up for consideration in October and November. In the meantime steps were taken to secure closer co-operation among manufacturers, especially on the matter of refraining from making commitments for 1936 deliveries on a basis contrary to the common welfare of the industry.

While these negotiations were in progress representatives of the Hearst organization again attempted to play the game that was so successful last year. A block of about 60,000 tons of newsprint for 1936 delivery was offered to Price Bros. & Company at the market. This company, now in the hands of a receiver, is badly off for newsprint tonnage. Had the offer been accepted, Hearst would have repeated his success of a year ago and a price increase blocked for another twelve months. Immediate steps were taken by other newsprint mills to keep Price Bros. in line with the other manufacturers, and the result of hurried conferences was that the Hearst offer was turned down. The same business was offered to another Canadian company and refused.

The position of Canadian newsprint producers is now stronger than it has been for several years, and the old rivalry

between big tonnage and low tonnage operators has been adjusted. Consumption of newsprint in the United States this year will show an increase of about 5 per cent, which will mean 100,000 additional tonnage from Canadian mills. Export demand, except in the case of Japan, has improved during the past year, the extent of the increase being about 25 per cent.

Thus, with demand for their product stimulated to a substantial extent, the newsprint men feel they are on firmer ground when they demand a higher price, and it would seem as though they at last have a very good chance of getting it.

The Washington Pulp & Paper Corporation in 1934 produced 89,486 tons of newsprint compared with a 1933 production of 81,315 tons.

SALINAS WAXED PAPER RUNNING STEADILY

Business has been so good with the Salinas Valley Waxed Paper Co. of Spreckels, Calif., that the firm's plant is now running all year around, instead of just during the lettuce season, as it did formerly. This plant was established in a building of the Spreckels Sugar Co. seven years ago to furnish waxed crate liners for the gigantic lettuce industry of the Salinas Valley and now it is shipping papers to every lettuce section in the west. Ever since its establishment, the firm has bought its kraft from the St. Helens Pulp & Paper Co.

The Salinas Valley company belongs to T. G. Emmons and Charles Goetz. Mr. Emmons lives at Pajaro and Acacia Streets in Salinas, four miles from Spreckels, where he has just built a new home, and his partner lives in Benson, Arizona, where he operates a sister company, the Arizona Waxed Paper Co., which furnishes waxed liners for the vegetable districts of its territory and also waxes "powder papers" for the Apache Powder Co., located near Benson.

C-W and C-Z IMPROVE FIRST QUARTER EARNINGS

Both the Crown-Zellerbach Corporation and its subsidiary the Crown-Willamette Paper Company improved their net earnings in the first quarter of their fiscal year ending July 31st as compared with the same period in 1934.

Crown-Zellerbach net income was nearly double that of the first quarter of 1934, being \$502,019 as compared with \$267,636. The 1935 first quarter earnings are equivalent to \$2 per share on the 250,601 share preference stocks, series A and B outstanding. In 1934 the comparative earnings were \$1.06 per preference share.

The net of \$502,019 is after all charges for depletion, depreciation, debenture interest and income taxes. The figures do not include the earnings of Crown-Willamette.

The Crown-Willamette Paper Company and its subsidiaries, including Pacific Mills Limited, reported a consolidated net profit of \$497,928 for the first quarter of the fiscal year as compared

with \$459,846 in the same period of 1934, an increase of \$38,082. Of the net earnings in this year's first quarter \$86,428 accrued to the common stock of Crown-Willamette, which is entirely owned by Crown-Zellerbach, as compared with \$48,346 in the same period of 1934. The balance of \$38,082, as compared with \$48,346 in the same period of 1934.

While Crown-Willamette's net profit for the first quarter of the 1935 fiscal year was \$38,082 greater than in the same period of 1934, the profit before deductions for depreciation, depletion, bond interest and income taxes, was \$1,492,630 or \$114,053 less than in the similar 1934 period. However, the deductions for depreciation, depletion and bond interest were lower. Income taxes for 1935 were higher than in 1934. Total deductions for the first quarter of 1935 were \$986,427 as compared with total deductions of \$1,139,424 in the same period of 1934.



Construction moves steadily forward on the new 150-ton unbleached sulphite pulp mill of the Pulp Division Weyerhaeuser Timber Company, at Everett, Wash.



**WE CORDIALLY INVITE MEMBERS
AND GUESTS ATTENDING THE
TAPPI CONVENTION
(SEPT. 18 - 21, 1935) TO VISIT THE
du pont exhibit**

1121 boardwalk • haddon hall block • atlantic city

... where we have arranged a graphic and complete presentation of the part played by du Pont products in the paper industry.

E. I. DU PONT DE NEMOURS & CO., INC.

ORGANIC CHEMICALS DEPARTMENT

DYESTUFFS DIVISION

WILMINGTON, DELAWARE

WANTED—A WATER USER

Aberdeen, Washington, is seeking an industry which will consume all or a large part of the output from its Wynooche industrial water system completed in 1931, but never utilized.

City officials of Aberdeen says that they are in a position to offer an industry a water rate lower than obtainable for a comparable supply of pure water anywhere else in the Pacific Northwest.

In 1930 the voters of Aberdeen approved a proposal to build the industrial system through a bond issue, and construction was immediately started on the Wynooche system, being completed late in 1931.

The water is taken from the Wynooche River which rises on the southern slopes

of the Olympic Mountains where snow covers the ground nine to ten months of the year. At one point, known as the Ox Bow, the rainfall by actual gauge is 185 inches a year. It is estimated that in the country where the Wynooche rises the rainfall is approximately 250 inches per year.

The map gives a clear idea of the lower portion of the Aberdeen industrial water system. Note the point from which the three-mile tunnel from the Wynooche empties into Lake Aberdeen as the storage reservoir is called.

Large Gravity Flow

The gravity flow through the concrete lined tunnel is 85 million gallons per day.

By pumping the flow through the tunnel can be doubled.

That the flow of the Wynooche River is more than adequate to maintain the industrial system is shown by a minimum flow of approximately 431 million gallons per day at the point of intake for the tunnel.

Lake Aberdeen, the storage reservoir, has a capacity of 200 million gallons of water.

The adjoining city of Hoquiam has voted a bond issue to meet the Aberdeen industrial system at the city limits and deliver it to any industrial site in Hoquiam.

The Wynooche River rises in the Olympic National Forest in virgin timber country. While this watershed may be logged, the Forest Service's program will insure rapid new growth permanently protecting the headwaters of the Wynooche.

The Aberdeen-Wynooche water system is independent of the domestic water system. The latter will be entirely free of debt by the end of this year. The excellent financial condition of its domestic water system is one of the chief factors permitting the city to offer the water from the Wynooche industrial system at rates below those quoted for any other similar supply in the Pacific Northwest.

CORRECTING THE TEMPORARY COMMITTEE OPPOSING A TARIFF ON WOOD PULP

In a bulletin issued July 8th by R. C. Mateer of the Scott Paper Company, a member of the Temporary Committee Opposing Tariff on Wood Pulp, he states in part:

"The United States production of wood pulp during 1934 amounted to 4,490,859 tons, as officially reported by the Bureau of the Census a few days ago. This is an increase of 4.6 per cent over 1933 production, and the largest in the history of the domestic industry with the exception of the period 1928-30. As contrasted with this was a decrease of 7 per cent in imports during 1934, as compared with 1933. Surely on the basis of these figures no one can successfully contend that the domestic pulp industry is being injured by imports."

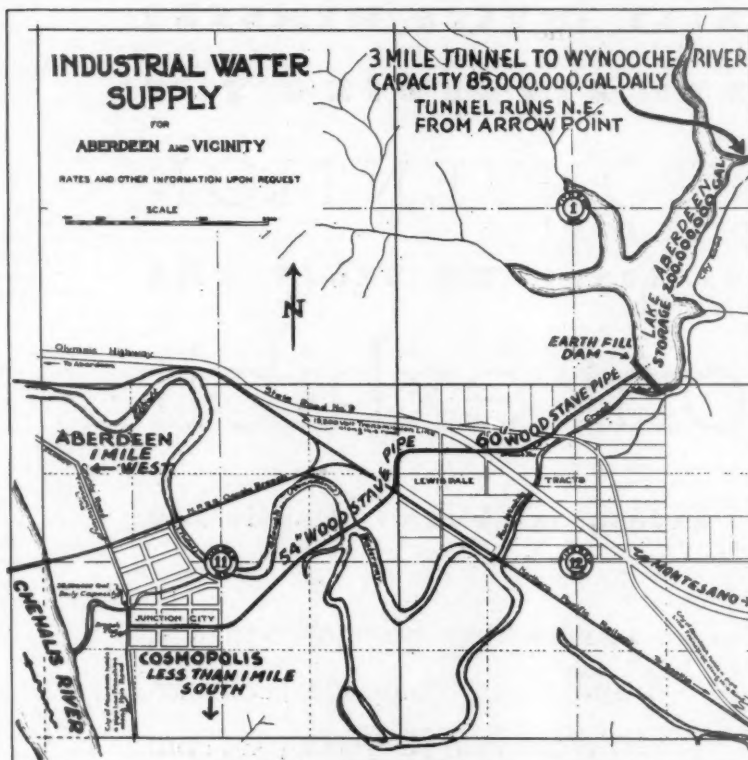
According to the latest revised figures of the Bureau of the Census (July 5th, 1935), the United States production in 1934 was 4,436,128 tons and in 1933 it was 4,276,204 tons, an increase of only 3.6 per cent over 1933.

In spite of this slight error in Mr. Mateer's figures, a misleading picture of the industry is given in his bulletin due chiefly to the fact that he has taken 1933 as a basis of comparison — a year when pulp production was 12 per cent below the peak year 1929, and a year when more pulp was imported into the United States than ever before, being 3 per cent greater than in 1929, formerly the peak year for imports.

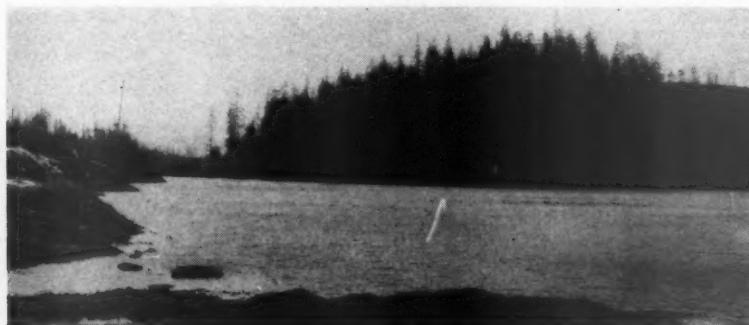
When it is realized that the domestic pulp industry operated at only 63 per cent of capacity in 1934 and that imports accounted for 30 per cent of the pulp consumed in the United States in 1934, and 82 per cent of all the pulp sold in the United States in 1934 was imported pulp, it is obvious that the domestic industry does need protection.

KASCH A FATHER

A son was born July 15th to Mr. and Mrs. William Kasch of Longview. Mr. Kasch is with the Pulp division of the Weyerhaeuser Timber Company.



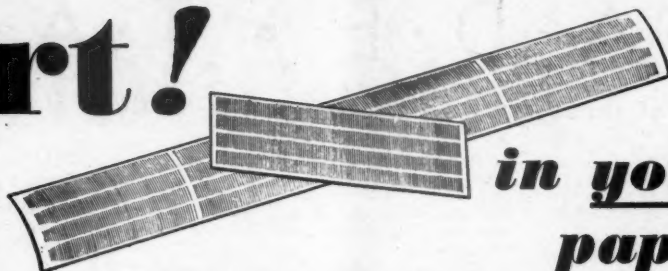
Map showing relationship of Aberdeen industrial water system to industrial sites in Junction City, Cosmopolis and Aberdeen.



LAKE ABERDEEN

Just outside city limits of Aberdeen, Wash. 200,000,000-gallon water storage reservoir for the Wynooche industrial water system completed by city of Aberdeen in 1931.

Dirt!



in your ? paper

Clean paper can be made only with the essential aid of the most efficient screening operations. Too wide slots, forced velocity, partially clogged screens and short useful screen plate life these are productive of low quality, high cost and dissatisfaction.

CRODON
The Chrome Plate
TRADE MARK REG. U. S. PAT. OFF.

Let us tell you how to cure these ills with chromium plate

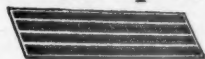
Worn, rough and inaccurate slots result from normal wear of ordinary plates. CRODON provides a permanently hard, durable protection against corrosion. Fine precision of slot dimensions is accurately maintained.

Fine slot sizes are possible with CRODON: not only is cleaner, finer paper obtained, but it is unnecessary, in order to maintain full production, to force velocity and increase dirt count. Scientific co-ordination of slot sizes can be arranged and kept permanent, thus introducing long fibres minus dirt. The added slot smoothness more easily passes screened stock without slowing up production. Clogging (which often reduces capacity 50% or more) is practically eliminated.

CRODON-plated screen plates attain long useful life. The unduly prolonged use of inefficient screens is no concern of mills which have installed chromium-plated plates — they're making cleaner and better paper at lower screening costs than ever before.

The realization of worth-while economies, establishment of new and enviable performance records and trouble-free operation materializes with the aid of CRODON. These attainments have been proved by practical experience of regular paper-making operations. CRODON-plated screens offer outstanding improvements over ordinary plates, whether flat or curved types.

Check up on your screening operations . . .



Let us send you our Bulletin No. 9 to more fully acquaint you with CRODON-plated screen plates.

Other outstanding successful applications in the paper industry are on press rolls, suction box covers, drying drums and embossing rolls. These and other specific applications are fully described in bulletins which will be furnished upon request.

The trade-mark CRODON assures the best in chromium plate

Most mills appreciate the importance of utilizing a reputable chromium plating service such as CRODON typifies, and which is recognized as a standard specification for the maximum in quality: dependability with resultant cost reductions, and improved operating efficiency.

Chromium Corporation of America

Executive Offices—120 Broadway, New York

P. O. Box 1546
Waterbury, Conn.

3125 Perkins Ave.
Cleveland, Ohio

4645 West Chicago Ave.
Chicago, Ill.

T · R · A · D · E · T · A · L · K

of those who sell paper in the western states

+ + + +

GATES JOINS EVERETT SALES STAFF

R. A. Gates has joined the San Francisco office of Everett Pulp & Paper Co., according to announcement made by Sales Manager J. Louis Murray. He spent a week in mid-August at the mill at Everett, Washington, to familiarize himself with the company's manufacturing methods and products.

With a background of many years of experience in the paper distributing field in the Middle West and on the Pacific Coast, supplemented by mill sales experience, "Bob" Gates brings to his new responsibilities a thorough understanding of the paper merchant's needs.

In Everett's San Francisco office he will look after Main Mill sales and service.

PAPER MEN INCORPORATE UNDER NEW CALIFORNIA LAW

San Francisco's Paper Trade Conference, composed of paper distributors, has filed articles of incorporation at the state capital at Sacramento and is proceeding with plans to function under a new California fair trade practice act. Under this act, it is a misdemeanor to sell below cost, plus overhead, and a Superior Court in Los Angeles county already has upheld a portion of the law.

There are three divisions in the Paper Trade Conference, as incorporated—fine or printing papers; wrapping papers, including twine and sanitary papers. H. Arthur Dunn, secretary of the conference, says the major houses and a majority of the smaller houses have signed the membership agreement, which is based on the act. Directors and offic-

ers were being chosen in August. "This new law is tighter than the N.R.A.," Mr. Dunn says.

The paper industry in San Francisco is the first unit to incorporate under the law and it is thought the paper trade group in Los Angeles may follow suit.

Members will file their prices with the association.

KORN AND DOHERTY HONORED

Joseph Korn, for twenty-eight years a salesman with the Zellerbach Paper Co. at Sacramento, was honored with a dinner at the Hotel Sacramento, August 30, when he retired from active work. On the same day, the Sacramento manager for Zellerbach, Lee Doherty, celebrated his twentieth anniversary with the company and received a service pin. Harold L. Zellerbach, president of the company, presided at the dinner.

BARNEMANN

Geo. C. Barnemann, Crown-Willamette Paper Co., died suddenly August 13 at his home in Oakland, Calif.

MIELKE

O. W. Mielke, San Francisco, general manager of Blake, Moffitt & Towne, paper distributors, was in the Pacific Northwest in August.

HAROLD ZELLERBACH

Harold L. Zellerbach, San Francisco, president of the Zellerbach Paper Co., plans to leave the middle of September to attend the fall meeting in Chicago of the National Paper Trade Association, of which he is president. It was reported in San Francisco that another coast dele-

gate would be Carl H. Fricke, Los Angeles, Taverner & Fricke, president of the Paper States Paper Trade Association.

O'KEEFE

Thos. O'Keefe, San Francisco, manager of the Pacific Coast and Sierra Paper Companies, was in the east in August.



LOWELL M. HEATH

Manager of the recently established Stockton Division of Blake, Moffitt & Towne.



The new Blake, Moffitt & Towne Stockton, California, Division. The announcement of the opening of this branch appeared in the August issue.

Announcing

an important new development in Recording Instruments



*Installation of New Taylor
Beater Roll Pressure Recorder*

*Taylor Control again contributes to the making of better paper
and to the saving of time and money in processing*

HERE is an outstanding development for checking a most important process in preparing stock for paper machines.

The new Taylor Beater Roll Pressure Recorder enables you to eliminate excessive roll pressures and save power.

It reduces to a minimum the beating time for each grade of stock—with a resulting increase in the beating capacity of each unit during every 24 hours.

By means of its chart record, the mill superintendent can check the beating efficiency and operation of the beater and control it within very close limits.

This is specifically what the new Taylor Pressure Recorder enables the beating engineer to do!

First—Adjust the roll to a definite pressure during the critical brushing period.

Second—Duplicate exactly the processing of each particular beating cycle *regardless of variations in stock consistency*.

Third—Adjust the roll to a predetermined schedule of time and pressure, and to bring each batch of stock to a definite value of freeness in approximately the same length of time.

This Taylor Pressure Recorder can be installed on any standard

pulp type beater. Installations made in Canada and the United States have given complete satisfaction over two years.

We will gladly send you names of companies using the Recorder so that you can learn first hand of its advantages and savings. Write Taylor Instrument Companies, Rochester, N. Y., or Toronto, Canada. Manufacturers in Great Britain—Short & Mason, Ltd., London.

Pacific Coast Representative — L. H. Wear, Room 533 Terminal Sales Bldg., 1220 S. W. Morrison Street, Portland, Oregon.

Taylor

Indicating / Recording • Controlling

**TEMPERATURE, PRESSURE and
FLOW INSTRUMENTS**

THEY'RE OFF!

The General Paper Company of San Francisco Employs An Effective Sales Competition Plan

By H. D. BEAN, Vice-President and General Manager

PLACE—The San Francisco-Oakland Trading Area.

TIME—Every month.

DISTANCE—A 100 per cent sales quota each month.

TRACK—As fast as the entries make it but heavy with competition.

WEATHER—Always bright with prospects.

STARTERS—The sales staff of the General Paper Company.

PURSE—Light in dollar value but heavy with incentive.

And that in brief is a synopsis of our present plan of sales competition—a new picture of an old idea in sales graphology. The illustration of our "Sales Speedway," which accompanies this article, may be of interest to those sales managers who are looking for a different manner of portraying sales results. It is true that our present plan may seem a bit facetious but it is our opinion that if we can inject a bit of fun into our work the easier it is to attain our objectives.

In explanation of our "sales speedway" it will be noted that the track is marked off in 25, 50, 75 and 100 distances, these figures representing percentages of quotas, and the positions of the racing cars indicating, in terms of percent, the accomplishments of each salesman as sales volumes are recorded each day.

The little racing cars cost but five cents each and, believe it or not, they have real rubber tires. The "sales speedway," which we fabricated ourselves, is made of layers of chipboard, the top

strips being arranged in such a manner as to permit the inside wheels of the cars to hang (or ride) in the grooves so formed. Thus the cars can be moved forward on the track as the race progresses.

The operation of the "sales speedway" is based on quotas set up for each salesman and prize money going to the three who attain the highest percentage of their respective objectives. There is no pay-off unless the finish line has been reached. To arrive at equitable quotas a monthly average is taken between the past year's sales and an estimate of what each salesman should accomplish under known conditions. Thus, if a representative averaged \$3000.00 a month in 1934 and the estimate for his accounts in 1935 is \$4000.00 a month, his quota would be set at \$3500.00 per month. All quotas are reviewed and adjusted every four months.

The purses offered are dependent upon those salesmen who reached their quotas during the preceding month; the management paying into the contest \$3.00 for



H. D. BEAN
and his Sales Speedway

each 100 per cent quota. That is, if eight salesmen made their quotas in June then the July pool would amount to \$24.00, the purse being split into first, second and third money of 50 per cent to the winner, 35 per cent for place and 15 per cent for show. By this method the men themselves make their own purses, for the more who reach the line this month, the larger the pool next month.

Though the purses are modest in dollar and cents value, the satisfaction of being flagged down as the winner, or of taking second or third money, even of crossing the finish line, seems to be of as much importance to the sales staff as the sum of the stake. Incidentally, we are beginning to note a tendency on the part of those who are out in front to help those who are slowing down. In fact since the "sales speedway" has been in operation we have uncovered weakness in the sales efforts of the trailers that might not have been disclosed otherwise.


All sales groups are graduated according to the respective ability and productiveness of its members; the stars of the staff have reached their prominence through ability, plus the application of proper merchandising methods. The rank and file salesmen seldom reach the top, because of meaningless tactics, lack of sales direction, or numerous other reasons. Visualization of results through a sales-graph, in any form, creates interest; put it up in a new or novel manner, and add the proper amount of incentive, and your number two men will soon be crowding number one—copying the stars' system of sales attack and obviously increasing the sales volume.

A rather amusing development to the monthly contests is a sweepstake now being run on the "sales speedway" by the other members of our staff, who, after drawing their tickets against the board, do their share to bring in a winner by bringing in inquiries, even making sales of merchandise for the credit of a favored entrant.



GENERAL PAPER COMPANY SALESMEN

Standing, from left to right: W. S. Durand, J. W. Kelly, J. Wichman, A. Armstrong, I. J. Ickes, B. F. Rossi and J. Kaufner. Kneeling, from left to right: H. MacLean, D. Blanchard, H. Fifield, J. Colton and J. Davis.



PUGET POWER
says-
"Customers of private utility companies should pay only their fair proportion of governmental costs as compared to other business enterprises and individuals. Their rates should not be loaded up with unfair taxes."

GOVERNMENT BUSINESS ENTERPRISES SHOULD PAY THEIR FAIR SHARE OF TAXES

PUGET SOUND POWER & LIGHT COMPANY
"To best serve the public interest"

SAN FRANCISCO CASE DECIDED AGAINST IMPORTER

An important case involving the dutiability of newsprint paper has been decided by the United States Customs Court. The paper in question was imported from Japan at San Francisco, and used for the Shopping News of that city. It was classified for duty as printing paper, on the ground that it contained 30 per cent of bleached sulphite. The importer protested that it was standard newsprint duty free. The Customs Court upheld the Customs officials in classifying the paper for duty. The case arose in 1932, when the Japanese paper was delivered in San Francisco at \$27 per ton. An effort to prove dumping was dropped because of the difficulty of learning Japanese production costs. The customs officials then decided the paper was not standard newsprint, and this ruling has been upheld by the courts. The Import Committee of the American Paper Industry cooperated with both the customs officials when the case was initiated, and later with the Department of Justice when the case came before the customs courts.

The Arkell Safety Bag Company has again taken to the United States Customs Court of Customs and Patent Appeals the question of the dutiable value of Swedish M. G. Kraft wrapping paper. This action is another step in the complaint made by the Import Committee in 1931 against the undervaluation of this paper. The United States Customs Court decided the paper was properly valued by the importers, but an appeal to the United States Court of Customs and Patents Appeals held the paper was heavily undervalued, and referred the case back

to the lower court to find a proper value. The lower court then found a dutiable value higher than that originally fixed by the appraiser, and the importers now have appealed again on the ground that the lower court has no power to find a higher value than that fixed by the customs officials. Since the case was initiated the importers have been forced to pay duty on the higher valuation, and will continue to pay this higher duty until a final decision is rendered.

KENETY VISITS COAST

W. H. Kenety, first vice-president and general manager of The Northwest Paper Company, with mills at Cloquet, Minnesota, was a recent visitor to the Pacific Coast.

He called on the various distributors of Northwest Pedigreed Papers with C. P. Sheldon, district sales manager for the Pacific Coast. Mr. Kenety reports conditions very favorable throughout the country, and he was very much interested in the Pacific Coast territory, this being his first trip to San Francisco and Los Angeles.

Northwest Pedigreed Papers are distributed on the Pacific Coast by Carpenter Paper Co. of California in Los Angeles, Carter, Rice & Co., Pacific Coast Paper Co., and Bonestell & Co. in San Francisco, and Carter, Rice & Co., in Portland and Seattle, and the McClintock-Trunkay Co. in Spokane.

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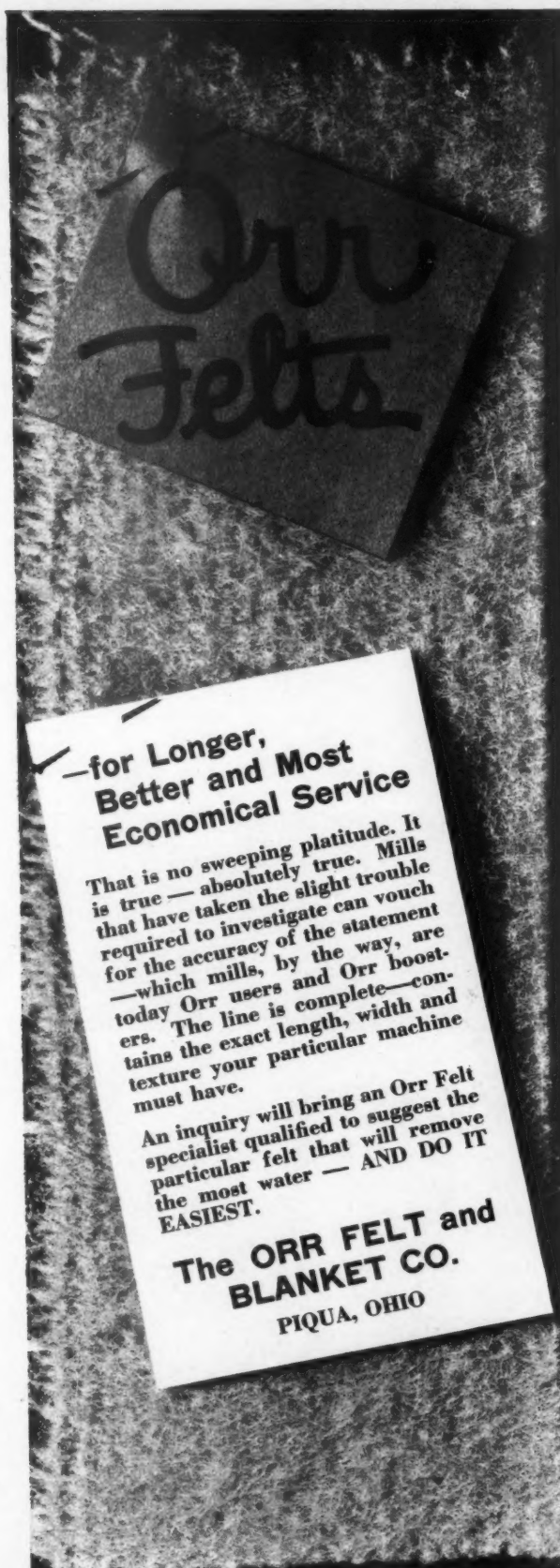
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MUTUAL PROJECT NEWS

Location of the proposed Prince Rupert bleached sulphite pulp mill has not yet been definitely decided on, although L. A. DeGuere, of Wisconsin Rapids, Wis., consulting engineer in charge of the project, has completed his surveys. At the Vancouver office of Mutual Pulp & Paper Company, sponsoring the Prince Rupert mill, it was announced that plans are rapidly being whipped into shape and that actual construction will probably begin in about three months. Frank L. Buckley, chief figure in the enterprise, has been in the east for several weeks arranging various details connected with the enterprise and on his return some time this month a detailed announcement of the company's program will probably be forth coming.

Two alternate proposals for a site are Seal Cove and an industrial location close to the city of Prince Rupert. Power will be obtained from Northern British Columbia Power Company at first. Water will be piped from Shawatlans Lake.

CANADIAN JAPANESE SITUATION

Culminating the trade war between Canada and Japan which has so far resulted in paralysis of trade between the two countries due to enforcement of prohibitory tariffs and customs embargoes, it now seems likely that Canada will cancel the existing commercial agreement with Japan altogether.

Pulp manufacturers in British Columbia have been among the chief sufferers from the trade war between Canada and Japan, but if the trade treaty is abrogated newsprint may also be hit.

Premier Bennett has informed the Tokio government that unless it withdraws the 50 per cent ad valorem surtax on Canadian imports Canada will give notice that it considers the Anglo-Japanese commercial treaty no longer applicable to Canada. Canada would then be free to take whatever action the national interest might require, without fear of running counter to prevailing covenants.

If the treaty is abrogated, as Canada now threatens, it would mean that Japan would be cut off from "most favored nation" treatment, under which Japanese goods have received the benefit of the intermediary tariff on imports in Canada. If Canada carries out its threat, Japanese goods would all be dutiable under the general tariff, plus the 33 1-3 per cent surtax recently imposed by the dominion in retaliation against Japan's tariff action.

In a blunt note to Sotomatsu Kato, Japanese minister to Canada, Premier Bennett says that Japan has persisted in demanding a privileged position in the markets of Canada which would involve discrimination against British and other favored nation countries. Mr. Bennett alludes to the depreciated currency of Japan and the difference in living standards as between Canada and Japan and claims that Tokio has left no alternative to the action now proposed.

SHAFFER RUNNING

The Shaffer Pulp Company of Tacoma resumed full time operations August 7th after nearly three months of idleness due to the sawmill strike.

CHILE

Production of paper and paper products in Chile has made notable progress during the past three years. Prior to 1931, over 70 per cent of the paper requirements were imported. Today the industry has an invested capital of 24,000,000 pesos and its plants produce newsprint, writing, wrapping papers, cardboard, pasteboard, and strawboard. The quality of the domestic product is not equal to the imported article, but it is being rapidly improved and the eventual elimination of all foreign imports excepting specialized products is expected. Of the 18 mills, four manufacture boards as well as paper. Production of writing and wrapping papers reached a total of 17,786 metric tons in 1933. Imports of paper products, in the meantime have declined from a value of 15,000,000 pesos in 1931 to only 5,000,000 pesos in 1932. Exports of paper are negligible.

JAPAN

Imports of wood pulp into Japan during May amounted to 30,779 tons, of which 16,029 tons was pulp for paper-making and 14,750 tons pulp for rayon. In comparison with April, receipts of pulp for paper-making declined 3,257 tons and pulp for the manufacture of rayon increased 1,420 tons. Imports of pulp from the United States during May aggregated 11,694 tons, accounting for about 38 per cent of the total. In comparison with April, the United States total fell 1,452 tons and the United States percentage of the total was 2 per cent smaller.

RAINIER HONORS EMPLOYEES

The largest dinner ever served in Shelton was to 735 persons, employees of the Rainier Pulp & Paper Company and their families, July 25th.

The occasion for the mammoth dinner was the honoring of the company's "Pioneers" and "Five-Year Group".

The chief feature of the evening was the presentation of service pins to the two groups. Sixty-nine "Pioneers" received the award, a pin set with a diamond and bearing the inscription: "Rainier Pulp & Paper Company Pioneer".

The "Five-Year Group", numbering one hundred and twenty-two, received bronze pins of the same design but with a 5 in place of the diamond. The background on each pin is a view of Mount Rainier.

The "Pioneers" are those employees who joined the organization in 1926 and 1927, and were working at the time the mill began operations. The "Five-Year Group" are those who have been employed continuously for five years.

After the dinner Frank Neffew, who conceived the idea of the "Pioneer", introduced L. D. Hack, mayor of Shelton, who in turn complimented the Rainier Pulp & Paper Company for its service to the community and for the spirit of cooperation and friendliness it had engendered among its employees. He then presented the first "Pioneer" pin to David B. Davies, general manager of the Rainier Pulp & Paper Company.

Mr. Davies expressed his appreciation of the honor and privilege of being one of the employees with the company since the start and extended his thanks for the friendly spirit of cooperation and helpfulness which had been shown by the employees during the period of trial and struggle, saying that this cooperation had played an important part in the organization's success.

Ferdinand Schmitz, assistant manager, read the list of "Pioneers" and of those in the "Five-Year Group" and awarded each the pin.

W. F. McCann closed the program with a parody on baseball rules for the benefit of the Rainier soft ball team.

The evening's festivities ended with dancing.

The dinner was arranged by Professor Loop of Shelton High School, and the affair was held in the school gymnasium. Girls from the home economics classes assisted in the cooking and serving.

CLARKE WINS SCHOLARSHIP

George Clarke, a member of the instrument department of the Longview Fibre Company, Longview, has been awarded a year's scholarship at the Institute of Paper Chemistry, Appleton, Wisconsin.

Eighteen scholarships were awarded. Approximately 800 applied. All of the eighteen have degrees in chemical engineering and will work at the institute for their doctor's degree. George Clarke graduated from the University of Minnesota in 1931 and has been with the Longview Fibre Company two years.

LOFTUS TRANSFERRED TO CARTHAGE

G. F. Loftus of the National Paper Products Company at Port Townsend, left with his wife and son August 21st, for Carthage, New York, where he is to become the office manager for the company's mill in that city.

He succeeds W. A. English who recently died.

SHAFFER JOINS TACOMA BANK

Ralph Shaffer, president of the Shaffer Pulp Company in Tacoma until May 1st, has joined the organization of the Puget Sound National Bank in Tacoma as chief executive of the newly organized industrial and marine department.

In announcing the appointment of Mr. Shaffer, Forbes P. Haskell, president of the Puget Sound National Bank stated:

"We feel that Mr. Shaffer will be particularly useful to the bank and to the city in helping bring new manufacturing enterprises here. His services will be available to the city and to commercial organizations in working out plans for industrial growth by expansion of present plants and the acquisition of new ones."

RIVERS A CANDIDATE

Roy Rivers of Longview, Washington, has been nominated as a candidate for fourth vice-president of the International Brotherhood of Paper Makers. B. J. Heick of Vancouver, Washington, was also nominated for this position but withdrew in favor of Rivers, urging all members of the Paper Makers Union on the Pacific Coast to support Mr. Rivers.

Sam Learned of Port Townsend, Washington, was nominated for fifth vice-president by the local of Escanaba, Michigan.

John Reiners of Port Angeles was nominated by the Camas local for the position of sixth vice-president.

The Escanaba, Michigan, local also nominated Sam Learned for delegate to the American Federation of Labor.

The election is held from October 1st to 15th.



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